

Welsh Pony and Cob Society DNA Update 2024.

Microsatellite is the present system of testing DNA and will become obsolete in the future so that we, like other breed societies, are transitioning to the use of Single Nucleotide Polymorphism (SNPs) for testing DNA.

DNA testing and parentage verification has become part of the annual breeding cycle for many years now. With the developments of technology, the Society is currently undergoing a transition over to SNPs (Single Nucleotide Polymorphism) testing in line with other Societies. The main factor for this consideration was the availability and life span of the present system of Microsatellite testing which will in time become discontinued by the service providers. Alongside this there are many benefits of transitioning to SNPs, which can enhance the level of accuracy of DNA profiling and can also provide additional insights into the animal's genetics.

The DNA process for the maiden mare will not change with the breeder/ owner except for the kit being sent direct to the vet: the sample will just be dealt with differently by the DNA lab.

The stallion licensing process has been reviewed as part of this transition and you will now be required to apply for a licence kit nominating your chosen vet and the kit will then be supplied directly to the vet. The licencing process will now involve two hair samples being required and further details on the process will be provided when a kit is purchased. A stallion will also require a full parentage test as part of the process to both his sire and dam.

Further information on the DNA transition can be found below in the FAQs we strongly recommend that you read this document and if you have any questions regarding the transition please do not hesitate to contact the Society via email enquiries@wpcs.uk.com and we will get back to you.

What does this change mean for Welsh Pony and Cob Society Breeders?

Multiple sample bags maybe sent in the case of stallion licencing and also parentage testing: this is not a mistake, and details will be included in the DNA pack to explain what each bag is for.

When requesting a DNA kit or stallion license you will need to provide details of the vet carrying out the test and the relevant paperwork and sample bag will be posted directly to the vet. No kits will be issued to breeders or owners.

Vets will be required to take a hair sample and sign the relevant documents supplied and the sample will need to include sufficient hair follicles. Your vet should check the quality of the sample before submitting it. The Society will not be liable for any retest request due to poor samples taken by a vet, or contaminated hair.

In the case of optional parentage testing, compulsory parentage testing where an animal is classes as a late registration, or an animal requiring parentage testing as it was produced by Artificial Insemination (frozen semen) or Embryo transfer, at this present time you can either obtain a SNPs profile for all required equines (when ownership allows). Or if the sire and dam already hold a Microsatellite profile you may choose to dual profile the equine you are registering this will mean two hair samples being requested to allow us to create both a Microsatellite profile to confirm parentage and a SNPs profile to be obtained for comparison against any future progeny (this option will incur additional costs and will be subject to availability).

In the case of stallion licences, it will be optional (at this present time) to either obtain a SNPs profile for the sire (when ownership allows) or to dual profile to Microsatellite and SNPs, allowing for a microsatellite profile to confirm the parentage to the sire with a MS profile, and then a SNPs profile to be obtained for comparison against any future progeny. This will be discussed with each owner on a case by case basis.

ALL HAIR SAMPLES MUST BE RETURNED BY THE VET DIRECT TO THE SOCIETY IN THE TAMPER PROOF BAG SUPPLIED ALONG WITH ALL PAPERWORK.

What sort of sample should my Vet be submitting?

A good clean sample of approx. 50 clean, intact hairs which have been pulled from the root and not cut. These hairs must include the follicle/ hair bulb. Please refrain from using soap or products on the hair prior to the vet pulling the hair as this can lead to a repeat sample request being required which will lead to additional costs for the breeder/owner.

Costs of transitioning to SNPs

There are currently no additional costs to DNA testing for breeder or owners. There is a rise in the test cost but at present the Society has chosen not to pass this onto its breeders/ customers at this present time.

What do I do if my mare or stallion has a Microsatellite DNA profile: do I need to retest to SNPs?

If you have a Welsh equine who has been DNA tested using the Microsatellite technology and is actively involved in the breeding program, we strongly recommend that you consider also obtaining a SNPs profile for this animal. Stallions actively breeding who also have a SNPs profile will reduce the turnaround times for offspring to receive their licences and mare who has a SNPs profile and becomes a parent of an animal requiring a full parentage test (late entries, A. I. or E. T. foals) will then already hold a profile and not delay the process of registration.

It is of course in the breeder/ owner's choice if they wish to obtain a SNPs profile but if an animal dies and the ability to use Microsatellite testing has reached its end of life, then this may result in an animal being unable to be registered in the main studbook and instead registered as a Section X.

Will a Maiden Mare have a SNPs profile?

Mares who have their first pure bred foal will require a hair sample as part of the registration process of the pure-bred foal. From the end of May 2024 all mares of first time foals have automatically receive a SNPs profile rather than a Microsatellite profile upon payment of the DNA test fee by the breeder. The breeder will not be required to do anything different than previously.

Late Registrations?

The Society would discourage members from leaving registrations until they are classed as late registrations as these will incur a full parentage DNA. In these instances, the late equine being registered would either be required to have a dual profile while available (at an additional cost to the breeder/ owner) or the parents would need to hold a SNPs profile or have SNPs profiles completed prior to the late equine's parentage test being completed.

Turnaround times of a SNPs profile?

SNPs profiles are currently taking approx. 4-6 weeks to be returned providing there are no issues with the hair sample provided and no requirements for retesting.